



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

January 12, 2007

In Reply Refer To: WTR-7

John Stevens, Plant Manager
Bruce Industries, Building Components Division
111 Air Park Vista Blvd
Dayton, Nevada 89403

Re: July 20, 2006 Clean Water Act Inspection

Dear Mr. Stevens:

Enclosed is the January 12, 2007 report for our July 20 inspection of the Building Components Division of Bruce Industries. Please submit a short response to the findings in Sections 2 through 4 of this report, to EPA, Lyon County, and the Nevada Department of Environmental Protection, by **March 30, 2007**.

The main findings are summarized below:

1 Building Components qualifies as "zero-discharging" metal finisher since it generates Federally-regulated process-related wastewaters but does not discharge to the sewers through the use of recycling and evaporation.

2 A local permit should be issued to require periodic self-certification of no discharge since compliance with the Federal standards in 40 CFR 433 is achieved by not discharging to the sewers.

3 All storm water floor drains including the one near the weld shop should be identified and permanently sealed.

I certainly appreciate your helpfulness extended to me during this inspection. I remain available to Lyon County and to you to assist in any way. Please do not hesitate to call me at (415) 972-3504 or e-mail at arthur.greg@epa.gov.

Sincerely,

Greg V. Arthur
CWA Compliance Office

Enclosure

cc: Joe Maez, NDEP
Skeet Sellers, Lyon County



U.S. ENVIRONMENTAL PROTECTION AGENCY

REGION 9

CLEAN WATER ACT COMPLIANCE OFFICE

NPDES COMPLIANCE EVALUATION INSPECTION REPORT

Industrial User: Bruce Industries, Building Components Division
111 Air Park Vista Blvd, Dayton, Nevada 89403
Zero Discharging New Source Metal Finisher (40 CFR 433)

Treatment Works: Lyon County Utilities Department
South Dayton Valley Wastewater Treatment Plant
(No NPDES Permit - Nevada Permit NEV10017)

Date of Inspection: July 20, 2006

Inspection Participants:

US EPA: Greg V. Arthur, Region 9, CWA Compliance Office, (415) 972-3504

State of Nevada: Joe Maez, NDEP, Bureau of Water Pollution Control, (775) 687-9431
Steve McGoff, NDEP, Bureau of Water Poll Control

Lyon County: Skeet Sellers, Utilities, Wastewater Supervisor, (775) 246-6000

Building Components: Jay Merrell, Production Manager, (775) 246-0101

Report Prepared By: Greg V. Arthur, Environmental Engineer

January 12, 2007



1.0 Scope and Purpose

On July 20, 2006 EPA, the Nevada Department of Environmental Protection (“NDEP”), and Lyon County conducted a compliance evaluation inspection of the Building Components Division of Bruce Industries in Dayton, Nevada. The purpose was to ensure compliance with the Federal, State and local regulations covering the discharge of non-domestic wastewaters into the sewers under the Clean Water Act and the Nevada Revised Statutes. In particular, it was to ensure:

- Classification in the proper Federal categories;
- Application of the correct Federal, State and local standards at correct sampling points;
- Consistent compliance with the standards; and
- Fulfillment of Federal self-monitoring requirements.

Bruce Industries operates two separate facilities in the Dayton Valley business park. The main facility, engaged in the manufacturing of aircraft lighting products, is located at 101 Evans Avenue. The subject of this inspection is the second facility, the Building Components Division of Bruce Industries (“Building Components”) located at 111 Air Park Blvd. Building Components would qualify as a categorical industrial user under the Clean Water Act within the Lyon County Utilities sewer service area if it discharged its process-related wastewaters to the sewers. Lyon County operates the South Dayton Valley wastewater treatment plant under a State of Nevada ground water permit. It does not operate under an NPDES permit because the treatment plant discharges to ground waters and to a golf course for reclaim. Lyon County Utilities does qualify under the Clean Water Act as a publicly-owned treatment works (“POTW”) subject to the Federal regulations for pretreatment and sludge in 40 CFR 403 and 503. The inspection participants are listed on the title page. Arthur conducted the inspection on July 20.

1.1 Process Description

Building Components comprises a set of associated operations involved in the manufacturing of residential products. The operations include shops for granite countertop fabrication, welding, powder coating, iron phosphating, and wooden cabinet making. Bruce Industries owns the products it makes at Building Components. Operations at this facility recently began. *See* photos on the next page.

1.2 Facility SIC Code

Building Components is assigned the SIC codes for the manufacturing of cut stone and stone products (SIC 3281), architectural and ornamental metal work (SIC 3446), metals coating (SIC 3479), and wood kitchen cabinets (SIC 2434).



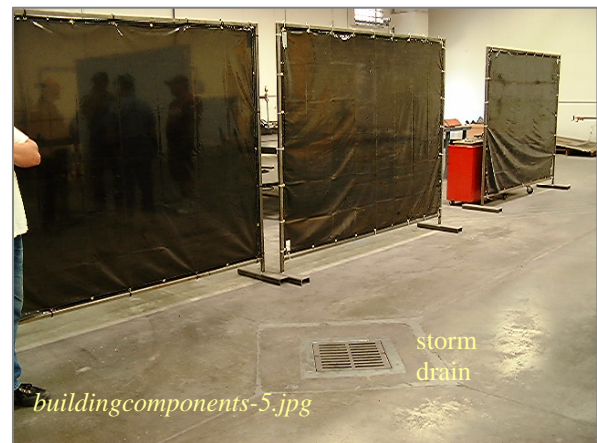
1.3 Wastewater Sources and Handling

There are no process-related wastewater discharges from Building Components to the Lyon County sewers. There are a number of process-related wastewaters, all of which are handled to not discharge nor require disposal, at least in the short term. However, whether these handling method would work in the long term could not be determined as of yet.

Water-jet Cutting - Granite work pieces are cut through garnet sand water-jet cutting. Cutting tail waters are captured into a plastic-lined bin for solids settling. Decant is recycled for reuse as make-up water through lamella plate-settling, bag filtration, and an ultrafiltration canister. The garnet sand sludge is hauled off-site as non-hazardous to a landfill. There are no floor drains in this area

Polishing - Granite work pieces are wet-polished manually with the tail waters captured in a floor trench that rings the polishing area. The floor trench drains to a sump. The sump contents are pumped through an ultrafiltration canister to a holding tank for recycling as polishing make-up. It is not clear yet how Bruce Industries plans to regenerate the ultrafiltration canister. *See* the photo below.

Weld Shop - The weld shop has a floor drain identified during this inspection as a storm water drain from the old Sherwin Williams plant. *See* the photo below.



Above: Weld shop storm water drain
Taken By: Greg V. Arthur
Date: 07/20/06

Left: Granite polishing wastewater recycling
Taken By: Greg V. Arthur
Date: 07/20/06

Phosphating - Iron phosphating of steel is performed within a self-contained open-topped spray booth. Overspray and rinse waters drain through the slatted floor into an under-floor catchment. The contents of the catchment recycle as make-up. Excess make-up is disposed



of through a dedicated evaporator unit located adjacent to the phosphating booth. The phosphating booth and chemical storage are all contained within built-in secondary containment. No floor drains were found. *See* the photos below.

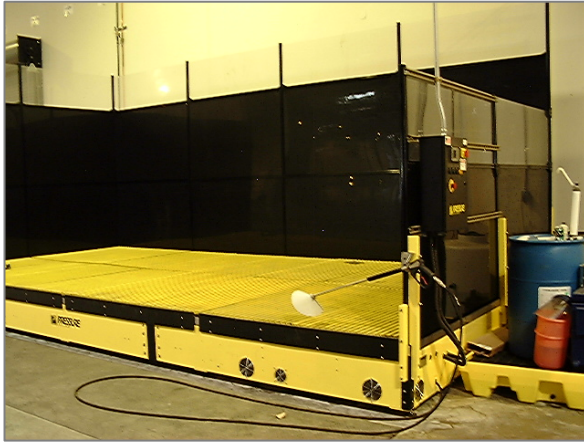


Photo: Phosphating spray booth
Taken By: Greg V. Arthur
Date: 07/20/06

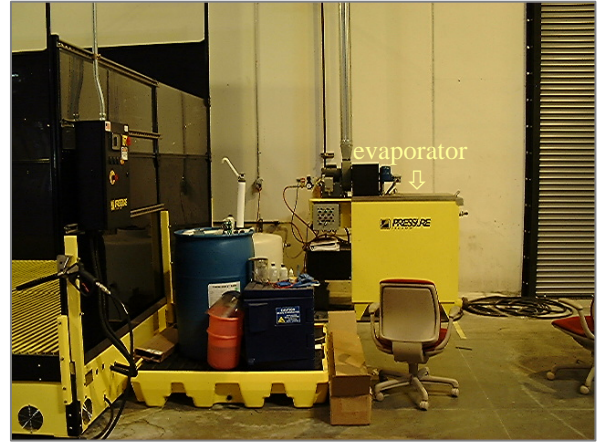


Photo: Phosphating evaporator
Taken By: Greg V. Arthur
Date: 07/20/06

Dry Operations - Powder coating and wood staining are performed in dry-booths. As a result, the powder coating and wood shops do not involve the generation of wastewaters. There were no floor drains found.

1.4 POTW Wastewater Treatment

State and Federal Legal Authorities – Lyon County operates the South Dayton Valley wastewater treatment plant under the authority of NDEP permit NEV10017 for the discharge of treated wastewater for reclaim and to the ground water. Lyon County does not possess a Federal NPDES permit issued under the Clean Water Act because the treated sewage does not discharge to surface waters. Nevertheless, Lyon County does qualify as a publicly-owned treatment works (“POTW”) under the Federal definition in 40 CFR 403.3(o) because the wastewater treatment plant treats mixed domestic and non-domestic wastewaters and its sludges are regulated under the Clean Water Act by the Federal regulations in 40 CFR 503.

POTW Configuration – The South Dayton Valley wastewater treatment plant consists of two treatment trains: a sequencing batch reactor ("SBR") and extended aeration lagoons. The City of Dayton generates an average of 220,000 gpd of domestic sewage. The domestic sewage feeds at a constant 140,000 gpd rate into the SBR. The remaining domestic flows are diverted through a splitter to the extended aeration lagoons. The SBR provides aerobic degradation, nitrification, and denitrification. In addition, the Dayton Valley business park generates an average of 60,000 gpd of process-related wastewaters and domestic sewage. Business park wastewaters, excess domestic sewage from city averaging 80,000 gpd, and the aerobic digester sludge from the SBR feed into the first of four lagoons. Primary Ponds #1 and #2 are aerated lagoons in series. Secondary Ponds #A and #B are facultative lagoons



operated one at a time. The facultative lagoons discharge without chlorination to a rapid infiltration basin. The SBR discharges without chlorination to a golf course for reclaim.

1.5 State and Local Legal Authorities

There are no local or State permits in effect directly regulating the discharge of non-domestic wastewaters from Building Components to the Lyon County sewers. However, a State permit issued to Lyon County indirectly affects the discharge from Building Components. The State permit imposes ground water quality discharge limits upon the city sewage treatment plant and the Federal sludge standards to the disposal of city sewage treatment plant sludge.

Ground Water Permit for Lyon County - Permit NEV10017 does not require Lyon County to obtain an approved pretreatment program. This is in keeping with the Federal regulations in 40 CFR 403.8(a) that allow for, but do not mandate, States or EPA to require small POTWs with design capacities under 5.0 mgd to obtain approved pretreatment programs. The permit also does not impose any pretreatment provisions. However, NDEP has recommended that Lyon County obtain an approved pretreatment program. Lyon County drafted a sewer use ordinance (reviewed by EPA) but as of yet has not adopted it into municipal law.

Sewer Discharge Permits for Building Components - Lyon County cannot issue its own local industrial user permits until the ordinance is adopted and the pretreatment program is funded by the Lyon County supervisors. NDEP has not issued a site-specific ground water permit that extends the Nevada revised statutes to Building Components, as an industrial discharger into a sewage treatment plant regulated under a State ground water permit.

1.6 Photo Documentation

Arthur took eight digital photos during this inspection, recorded as the jpeg files named *buildingcomponents-1.jpg* through *buildingcomponents-8.jpg*. The photos not published in this report are duplicates.



2.0 Sewer Discharge Standards and Limits

Federal categorical pretreatment standards (where they exist), national prohibitions, State groundwater, and the local limits (where they exist) must be applied to the sewered discharges from industrial users. (40 CFR 403.5 and 403.6).

Summary

No Federal categorical pretreatment standards, national prohibitions, or local limits apply because there are no process-related wastewater discharges to the sewers. However, Building Components does generate wastewaters that would be regulated under the Federal metal finishing standards if they were discharged. The application of Federal standards, national prohibitions, and local limits was determined through visual inspection.

Requirements

- None.

Recommendations

- A permit from Lyon County should simply require written certification every six months that no process-related wastewaters were discharge to the sewers.

2.1 Classification by Federal Point Source Category

Building Components would qualify as a metal finishing operation subject to the Federal standards in 40 CFR 433 if its process-related wastewaters were discharged to the sewers. A discharge would not qualify under any other Federal rule in 40 CFR 407-471.

New or Existing Sources - Building Components would qualify as a new source metal finisher because it was constructed after the August 31, 1982 promulgation date of the rule.

Facility Definition - Building Components and the Bruce Industries plant at 101 Evans are considered separate facilities because they are not contiguous. The definition of "facility" comes from the Federal Clean Water Act regulations which define a "source" as a building, structure, facility, or installation from which there is or may be a discharge of pollutants, 40 CFR 122.2. The metal finishing regulations further refer to the regulated entity as a plant, user, industrial facility, or source, 40 CFR 433.10(a) and 433.14. Taken together a "facility" is defined by common function on a contiguous piece of property.

2.2 Local Limits and National Prohibitions

Local limits and national prohibitions would apply to any discharge of the process-related wastewaters generated on-site. Local limits and national prohibitions are meant to express the limitations on non-domestic discharges necessary to protect the sewers, treatment plants,



treatment plant sludges, and their receiving waters from adverse impacts. Generally, technically-based numerical local limits supplant national prohibitions and any site-specific State limits.

2.3 Federal Categorical Pretreatment Standards New Source Metal Finishing - 40 CFR 433.17

40 CFR 433.17	Cd	Cr	Cu	Pb	Ni	Ag	Zn	CNt	CNa	TTO
daily-maximum (mg/l)	0.11	2.77	3.38	0.69	3.98	0.43	2.61	1.20	0.86	2.13
month-average (mg/l)	0.07	1.71	2.07	0.43	2.38	0.24	1.48	0.65	0.32	-

Applicability - Under 40 CFR 433.10(a), the metal finishing standards would apply to the process-related wastewaters from Building Components if discharged to the sewers because the facility's operations involve phosphating (a form of chemical coating). The metal finishing standards "... apply to plants that perform ..." the core operations of electroplating, electroless plating, etching, anodizing, chemical coating, or printed circuit board manufacturing and they extend to other on-site operations, such as cleaning, polishing, painting, machining, and assembly associated with metal finishing and specifically listed in 40 CFR 433.10(a). If any of the core operations are performed, the new source metal finishing standards would apply to discharges from any of the core or associated operations.

2.4 Compliance Sampling

There currently are no identified process wastewater discharges to the sewers. There is at least one open floor drain connection to a storm sewer expected to be sealed. As a result, there are no sampling points for the non-domestic wastewaters.

2.5 Pollutants of Concern

There are no pollutants of concern as long as Building Components does not discharge its process-related wastewaters. The pollutants of concern would comprise those regulated by the Federal metal finishing standards, national prohibitions (*pH*), and site-specific pollutants (*zinc, suspended solids*) for which there is a potential to cause the South Dayton Valley wastewater treatment plant to violate its NDEP permit or Federal sludge limits.



3.0 Compliance with Federal Standards, National Prohibitions, and Local Limits

Industrial users must comply with the Federal categorical pretreatment standards that apply to their process wastewater discharges. 40 CFR 403.6(b).

Categorical industrial users must comply with the prohibition against dilution of the Federally-regulated waste streams as a substitute for treatment. 40 CFR 403.6(d).

Industrial users must comply with the provision restricting the bypass of treatment necessary to comply with any pretreatment standard or requirement. 40 CFR 403.17(d).

All non-domestic wastewater discharges to the sewers must comply with local limits and the national prohibitions. 40 CFR 403.5(a,b,d).

Summary

Building Components achieves compliance with the Federal metal finishing standards by not discharging the Federally-regulated process-regulated wastewaters through recycling and evaporation. In the same way, Building Components ensures compliance with the national prohibitions and local limits that would apply to discharges. The only potential source of uncontrolled discharge could come from the open storm water floor drain near the weld shop.

Requirements

- Discharge of process-related wastewaters to storm drains is prohibited.

Recommendations

- Bruce Industries should identify and permanently seal all storm water floor drains throughout, including the one identified near the weld shop during this inspection.

3.1 National Objectives

The general pretreatment regulations were promulgated in order to fulfill the national objectives to prevent the introduction of pollutants that:

- (1) cause operational interference with sewage treatment or sludge disposal,
- (2) pass-through sewage treatment into the receiving waters or sludge,
- (3) are in any way incompatible with the sewerage works, or
- (4) do not improve the opportunities to recycle municipal wastewaters and sludge.

This inspection did not include an evaluation of whether achievement of the national objectives in 40 CFR 403.2 have been demonstrated by the Lyon County wastewater treatment plant through consistent compliance with their sludge and discharge limits.



4.0 Compliance with Federal Monitoring Requirements

Significant industrial users must self-monitor for all regulated parameters at least twice per year unless the sewerage agency monitors in place of self-monitoring. 40 CFR 403.12(e) & 403.12(g).

Each sample must be representative of the sampling day's operations. Sampling must be representative of the conditions occurring during the reporting period. 40 CFR 403.12(g) and 403.12(h).

Summary

Building Components does not qualify as a significant industrial user since it does not discharge its Federally-regulated wastewaters to the sewers. As a result, it is not necessary to for Lyon County to issue a permit with self-monitoring requirements. However, since Building Components achieves compliance with the Federal metal finishing standards, national prohibitions, and local limits through zero-discharge practices, Lyon County should issue a permit that substitutes a written certification of no discharge in lieu of self-monitoring.

Requirements

- None.

Recommendations

- Building Components should submit a written certification of no discharge once every six-months.